The Shift Towards Phenol-Free: What Converters Need to Know About DT Labels

The labeling industry is undergoing a significant transformation, driven by increasing awareness of the potential health and environmental impacts of bisphenol S (BPS) and other phenols. Several states are enacting legislation to restrict or ban the use of these chemicals in thermal paper, which is widely used for direct thermal (DT) labels in various sectors, from retail and logistics to food and healthcare. If you're a label converter, understanding this change is crucial for staying competitive and compliant in today's market.

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Understanding Phenol and Its Impact on Labels

Phenol compounds, particularly Bisphenol A (BPA) and Bisphenol S (BPS), have long been used in thermal printing. These chemicals act as color developers, helping produce the images and text on thermal paper. However, recent studies have raised concerns about their potential harmful effects. BPA, for instance, has been linked to various health issues, including reproductive harm and endocrine disruption. This has led to its replacement with BPS in many applications, but BPS is now facing scrutiny for similar reasons.

For label converters, the presence of phenol in labels poses a dual challenge. Firstly, there's the risk of regulatory noncompliance, which can lead to legal penalties. Secondly, there's the growing consumer demand for safer, more sustainable products.

Regulatory Landscape and Compliance

Regulations around phenols in thermal paper are tightening. In California, BPS has been added to the Proposition 65 list, meaning businesses must provide warnings about significant exposures to this chemical. Starting December 29, 2024, all shipments to California must either be below the safe harbor limit for BPA or be labeled with a Prop 65 warning. Meanwhile, Washington will prohibit bisphenol-containing thermal paper starting January 1, 2026.

These regulatory changes underscore the importance of transitioning to phenol-free solutions. Converters need to stay informed about state-specific requirements to avoid compliance issues and potential disruptions to business operations. Working with suppliers to develop phenol-free portfolios can help converters meet these new standards.

The Impact on Converters

For converters, this shift towards phenol-free materials presents both challenges and opportunities:

Material Sourcing: Converters need to secure reliable sources of no phenol added thermal paper that meet their specific requirements for print quality, durability, and adhesion. This may involve collaborating closely with suppliers to ensure a consistent supply of compliant materials.

Process Adaptation: Switching to no phenol added alternatives may require adjustments to existing printing and converting processes. Thorough testing and validation are crucial to ensure optimal performance and avoid potential issues.

Customer Communication: Transparency is key. Converters should proactively communicate with their customers about the transition to phenol-free labels, highlighting the safety and compliance benefits of these new materials.

Avery Dennison's Commitment

Avery Dennison is committed to supporting converters through this transition. We are actively developing and expanding our portfolio of no phenol added DT label materials that meet the evolving needs of our customers and comply with the latest regulations. Our technical experts are available to provide guidance and support on material selection, process optimization, and testing procedures.

The Future of DT Labels

The move towards phenol-free DT labels is a positive step towards safer and more sustainable labeling solutions. By embracing this change and collaborating closely with suppliers like Avery Dennison, converters can ensure they remain compliant with regulations, meet customer expectations, and contribute to a healthier future.

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